

IN THE CLAIMS

The status of each claim in the present application is listed below.

1. (Currently Amended) A method for detecting negatively supercoiled DNA on interphase chromosomes in intact living cells, comprising ~~characterized by including the steps of~~ incorporating biotinylated psoralen into intact living cells, irradiating the living cells with long-wavelength UV rays, causing the cells to react with adivin which has been labeled with a color-developing substance, a fluorescent substance, or a chemiluminescent substance, and measuring developed color, emitted fluorescence, or emitted chemiluminescence of the cells.

2. (Currently Amended) A method for detecting an intact a living cell containing negatively supercoiled DNA on interphase chromosomes, comprising ~~characterized by including the steps of~~ incorporating biotinylated psoralen into intact living cells, irradiating the cells with long-wavelength UV rays, causing the cells to react with adivin which has been labeled with a color-developing substance, a fluorescent substance, or a chemiluminescent substance, and measuring developed color, emitted fluorescence, or emitted chemiluminescence of the cells.

3. (Original) The detection method according to claim 1 or 2, wherein the cells are eukaryotic cells.

4. (Previously Presented) The detection method according to claim 1, wherein incorporation of biotinylated psoralen into cells is performed in the presence of a cell membrane permeation promoting agent.

5. (Previously Presented) The detection method according to claim 2, wherein incorporation of biotinylated psoralen into cells is performed in the presence of a cell membrane permeation promoting agent.

6. (Previously Presented) The detection method according to claim 3, wherein incorporation of biotinylated psoralen into cells is performed in the presence of a cell membrane permeation promoting agent.

Claim 7: (Canceled).